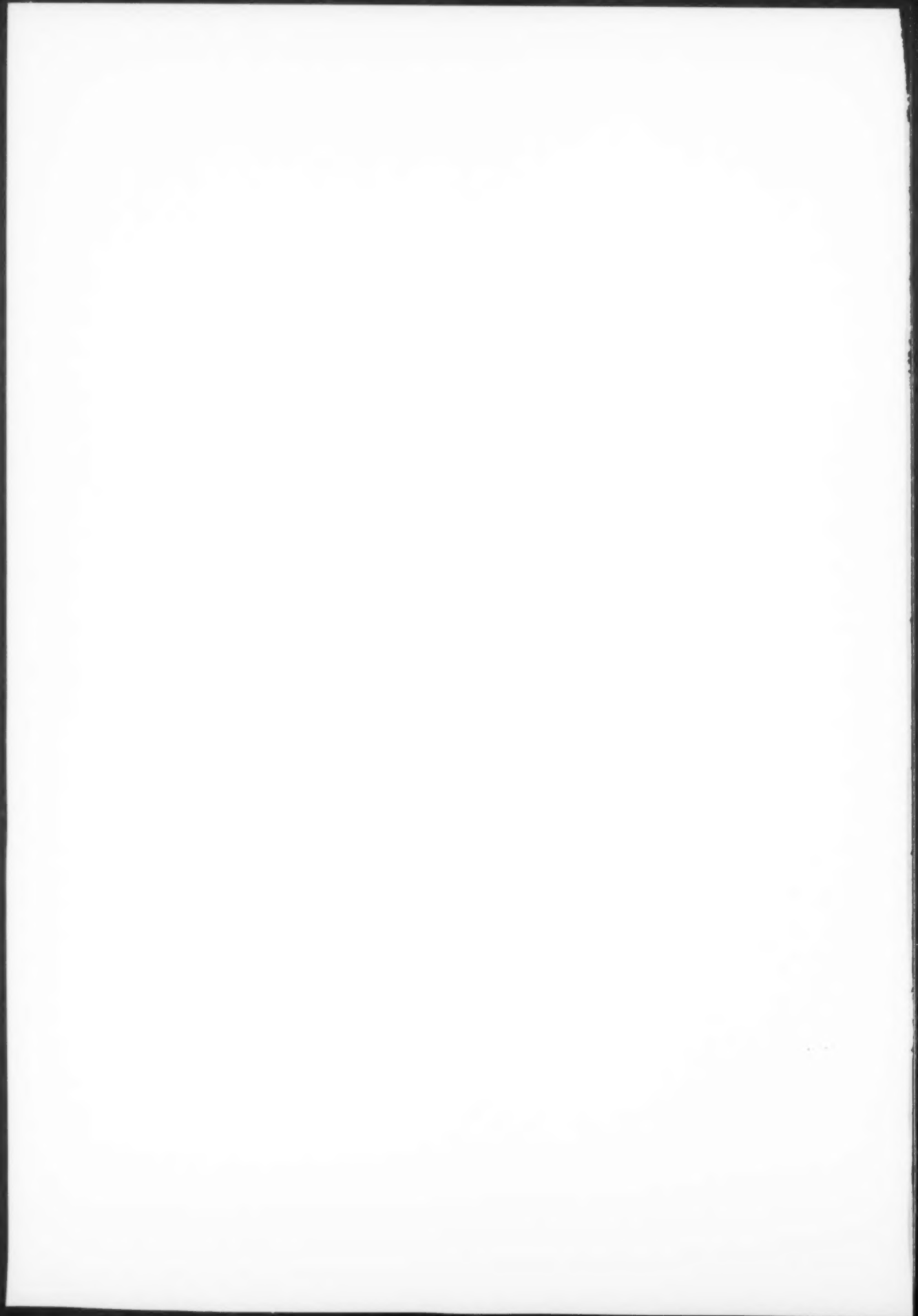


Materials Science and Technology
Author and Subject Indexes

Vol. 13, 1997



Author Index

Vol. 13, 1997

Ababou, S.	971	Deuis, R. L.	511	Husain, M.	484
Abdo, Z. A. M.	533	Di Lazzaro, P.	526	Husain, S. W.	110
Abrão, A. M.	445	Di Russo, E.	420	Hwang, W. S.	695
Acosta, P.	923	Ding, P.	600	Hwang, Y.-H.	982
Adejolu, K.	313	Dingley, D. J.	69	Inuki, T.	679
Ahmed, M.	110	Ducroquet, F.	971	Iqbal, J.	618
Aki, M.	673	El Hiti, M. A.	625	Ishida, N.	949
Akselsen, O. M.	156	El Shora, A. I.	625	Islam, M. F.	1045
Ameyama, K.	673	Elliot, K.	217	Itman, A.	49
Andrade Gamboa, J. J.	865	Elliott, R.	24, 117, 223, 319, 1007	Iwasaki, H.	825
Andrén, H.-O.	233	Ellis, B.	163	Jackson, A.	61, 203
Antón, N.	847	El-Mahallawy, N. A.	832	Jacovetti, G.	971
Appa Rao, G.	1027	El-Sissi, A. R.	832	Jagasivamani, V.	887
Arjuna Rao, A.	769	Engelmann, H.-J.	1016	Jahn, M.-T.	982
Artishi, M.	679	Engler, O.	93	Janczak, J.	852
Asahina, T.	825	Fällman, S.	233	Jaraiz, M.	893
Ashfold, M. N. R.	551	Fan, Z.	327	Jargelius-Pettersson, R.	604
Aspinwall, D. K.	445	Fazli, M.	813	Jayakumar, T.	614
Assar, A. M.	702	Fei, W. D.	918	Jen, C. K.	596
Atiq, S.	375	Felli, F.	420	Jeynes, C.	961
Attia, A. N.	832	Fenollosa, R.	954	Jiang, X. D.	918
Auret, F. D.	945	Fergus, J. W.	533	Jiménez, J. A.	923
Ayub, H.	110	Ferry, M.	85	Jin, Y.	173
Bagheri, S. D.	541	Field, D. P.	69	Jin, Z.-H.	727
Bai, W. M.	12	Fox, P.	912	Jonas, J. J.	379
Bailón, L. A.	893	Frangini, S.	526	Jones, H.	655
Baldan, A.	1033	Fras, E.	989	Kale, R. D.	937
Bandyopadhyay, S.	778	Frommeyer, G.	923	Kang, S. B.	331, 905
Banerjee, D.	755	Fuji, A.	673	Kapturkiewicz, W.	989
Barbolla, J.	893	Fujii, K.	477	Karesk, K. R.	217
Barr, S. C.	655	Fukumoto, S.	679	Karlsson, B.	560
Basak, A.	401	Gale, W. F.	533	Karlsson, L.	604
Bayati, H.	117, 319	Gatenby, K. M.	660	Kawakami, H.	1039
Beier, W.	852	Gilmore, C.	453	Kazerooni, R.	1007
Bell, T.	778	Giraudet, L.	971	Kearns, M. A.	650
Bhadesia, H. K. D. H.	631, 640	Gnanamoorthy, J. B.	937	Kelly, P. V.	961
Bhaduri, A.	356	Goodman, S. A.	945	Kendall, K.	977
Biselli, C.	489	Gottstein, G.	289	Keshava Murthy, K.	343, 503
Bleay, S.	453	Greasley, A.	31	Kestenbach, H.-J.	49, 731
Boccaccini, A. R.	852	Grech, M.	408	Khadhraoui, M.	360
Bohé, A. E.	865	Gregson, P. J.	709	Khan, A. Q.	110, 618
Bolingbroke, R.	210	Grong, Ø	156	Khan, Zishan H.	484
Böttger, A.	806	Guédou, J. Y.	360	Khatak, H. S.	937
Brotzu, A.	420	Guillot, G.	971	Kim, B. G.	590
Brozzo, P.	645	Gupt, K. M.	872	Kim, D. H.	859
Buni, S. Y.	749	Gupta, M.	187, 523, 584	Kim, G. H.	182
Cao, W.	360	Guzik, E.	989	Kim, H. J.	497
Capurro, M.	645	Hämäläinen, E.	103	Kim, H. W.	905
Cardoso, K. R.	49	Hamid Ali, A. S.	24	Kim, J. S.	859
Castex, L.	360	Hammad, S. M.	625	Kimoto, T.	477
Castillo, T.	897	Hand, R. J.	163	Kimura, M.	673
Chakraborty, M.	769	Hänninen, H.	103	Kobayashi, T.	497
Chang, E.	687	Hashmi, F. H.	110, 618	Kovac, P.	439
Chen, M.	12	He, L.-Z.	12	Krajnikov, A. V.	877
Chen, S. C.	143	Hedjazi, J.	813	Krishna Rao, P.	872
Chen, X. M.	163	Herbert, P. A. F.	961	Ku, J. S.	56, 251
Choi, H.-C.	568	Hérino, R.	965	Kumar, M.	1027
Cirillo, P.	645	Hermann, Ph.	489	Kumar, R.	887
Clemente, R.	954	Hertzman, S.	604	Kusabiraki, K.	369
Clode, M. P.	818	Higashi, K.	825	Kusui, J.	477
Cooper, P. S.	650	Hildebrandt, S.	961	Lai, M. O.	187, 192, 1051
Cornet, A.	957	Ho, N. J.	56, 251	Laitinen, A.	103
Court, S. A.	660	Hornig, C.-F.	982	Lascovich, J.	526
Crean, G. M.	961	Hsu, W. M.	687	Leclerc, Y.	945
Crowther, D. N.	243	Huang, J. C.	143	Lee, C. H.	590, 859
Das, T.	778	Huhtala, T.	604	Lee, D. M.	590
Davami, P.	813	Hui, S.	533	Lee, D. N.	289
den Ouden, G.	791	Humphreys, F. J.	85	Lee, J. C.	182

Lee, J. S.	590	Papworth, A.	912	Sudarshan, T. S.	887
Lee, N. I.	182	Park, Y. B.	289	Suh, B. K.	590
Leonard, A. J.	41	Partridge, P. G.	35, 453, 551	Sundaresan, S.	343, 503
Lewis, J.	379	Pasquevich, D. M.	865	Suštar, T.	555
Li, C.	918	Pearce, D. H.	852	Swain, M. V.	778
Li, C.-L.	727	Peiró, F.	957	Swaminathan, K.	937
Li, F.	17	Perrin, C.	41	Taha, M. A.	832
Li, W.	596	Pierdominici, F.	526	Tajima, M.	949
Liimatainen, J.	103	Pilling, J.	1045	Tang, J.	600
Lim, L. C.	1051	Pinna, F.	420	Tauqir, A.	618
Lim, S. C.	584, 859	Ponton, C. B.	852	Teoh, K. W.	695
Lin, S. C.	761	Poole, W. J.	897	Thewlis, G.	257
Lindstedt, U.	560	Potluri, N. B.	503	Tjong, S. C.	56, 251, 1023
Ling, S.	187	Prasad, B. K.	928	Toba, R.	949
Lisboa, O.	596	Prasad, Y. V. R. K.	755	Tokizawa, M.	477, 1039
Liu, P. L.	667	Prasad Rao, K.	1057	Tomita, T.	679
Liu, S.-J.	982	Praseuth, J. P.	971	Torralba, J. M.	847
Liu, Y. L.	331	Radhakrishna, C. H.	1057	Torvund, T.	156
Liu, Z.-K.	740	Raghunathan, V. S.	469	Tosto, S.	526
Llewellyn, D. T.	389	Rainforth, W. M.	41, 655	Tsakirooulos, P.	797
Lloyd, D. J.	660	Raj, Baldev	614	Tsubakino, H.	679
Lopez, H. F.	989	Rajan, K. K.	937	Tung, S. K.	1051
Lu, L.	192	Rajan, M.	937	Tyagi, A. K.	937
Lundin, L.	233	Rajendran Pillai, S.	937	Uhlemann, M.	1016
Lynch, S. M.	961	Rama Rao, P.	277	Ule, B.	555
Ma, X.-P.	727	Rama Rao, V. V.	415	Ulvensøen, J. H.	156
Mabuchi, M.	825	Ramakrishna Rao, V.	872	Vaidyanathan, S.	614
Mahajan, Y. R.	415	Raman, K. S.	337	van der Zwaag, S.	308
Mallia, J.	408	Raman, N.	749	van Genderen, M. J.	806
Manjón, F. J.	954	Rateick, R. G.	217	van Mourik, P.	308
Mann, S. D.	299	Ravi, B.	785	Vatne, H. E.	93
Manoharan, M.	523	Rawlings, R. D.	375	Velasco, F.	847
Manzar Malik, M.	484	Ray, S. K.	356	Velmurugan, S.	937
Mari, B.	954	Reif, W.	832	Vermolen, F. J.	308
Marqués, L. A.	893	Rezzoug, K.	971	Vicente, J.	893
Matsuki, K.	477, 1039	Ridley, N.	1045	Vijayalakshmi, M.	469
McLaren, A. J.	210	Robertson, D. G.	459, 575	Voskamp, A. P.	430
McLean, A.	596	Robson, J. D.	631, 640	Wallach, E. R.	135
McShane, H. B.	459, 575	Rodič, T.	555	Wang, F. H.	163
Meaden, G.	551	Rodriguez, P.	356	Wang, T.-M.	12
Mehrabadi, H.	997	Routbort, J. L.	217	Wang, W. H.	761
Militzer, M.	877	Ruano, O. A.	923	Wang, W. L.	667
Mintz, B.	243, 313, 379, 997	Rubio, J. E.	893	Wang, Z.	125
Miodownik, A. P.	797	Ruggiero, M.	5	Wang, Z. G.	667
Misra, R. D. K.	277, 872	Ruiz-Prieto, J. M.	847	Warashina, M.	949
Mitra, R.	415	Rutter, J. W.	5, 541	Ward-Close, C. M.	349
Mitte-meijer, E. J.	430, 806	Rylands, L. M.	655	West, D. R. F.	375
Moorthy, V.	614	Sagar, P. K.	755	Whiteman, J. A.	257
Morante, J. R.	957	Saroja, S.	469	Wieting, J.	877
Morris, D. G.	489	Satya Prasad, V. V.	872	Wilkinson, A. J.	79
Motoyasu, G.	596	Schalín, M.	740	Wilson, A.	604
Muddle, B. C.	299	Schutte, C.	945	Wisbey, A.	35, 349
Muñoz, V.	954	Schwarz, S.	1016	Wu, H.	1051
Munroe, P.	778	Schwarzacher, W.	453	Xiang, S.	477
Murakami, S.	1039	Seddon, A. B.	163	Xiao, Y. H.	791
Murali, S.	337	Segura, A.	954	Yanchenko, A. B.	401
Murtagh, M.	961	Sekhar, N. C.	343	Yang, C.-C.	687
Murthy, K. S. S.	337	Sellars, C. M.	210	Yang, J. B.	695
Murty, B. S.	769	Senogles, D. J.	257	Yannacopoulos, S.	173
Muthukkaruppan, S.	337	Seshan, S.	749	Yao, C. K.	918
Myburg, G.	945	Shabestari, J. M.	813	Yao, X.	841
Nabiyouni, G.	453	Shady, M. A.	832	Yap, S. H.	192
Nam, W.-J.	568	Shahani, R.	210	Yellup, J. M.	511
Nassar, A.	313	Shaker, M.	243	Yip, T.-H.	125
Nazerboland, A.	223, 1007	Shao, G.	797	Yokote, T.	477
Nes, E.	93	Shehata, M. F.	1016	Yoon, E. P.	859
Ng, W. B.	584	Sheppard, T.	61, 203	Yu, C. C.	887
Nicholson, E. D.	453, 551	Shercliff, H. R.	897	Yu, T.	600
Nicholson, J. A.	453, 551	Shi, G.	600	Zhang, Y.	600
Niinomi, M.	497	Shi, H.	210	Zhen, L.	905
Nilsson, J.-O.	560, 604	Shirzadi, A. A.	135	Zhou, M.	818
Nilsson, M.	604	Shivkumar, S.	841	Zhou, S.	600
North, T. H.	673	Sidjanin, L.	439	Zhu, S. M.	251, 1023
Nyström, M.	560	Sijbrandij, S. J.	806	Zhukov, A. A.	401
Oguocha, I. N. A.	173	Sinclair, I.	709	Zulfequar, M.	484
Okita, K.	679	Smith, D. J.	35	Zuo, Y. Q.	35
Olivier-Martin, F.	971	Smith, G. D. W.	806		
Owhadi, A.	813	Soda, H.	596		
		Subramanian, C.	511		

Subject Index

Vol. 13, 1997

Age hardening	778, 897, 905	Deformation induced ferrite	379
Agglomeration	977	Deformation induced martensite	389
Aging	173, 187, 356, 523, 604	Diamond	551
Alumina	173, 182	Diamond coatings	453
Aluminising	832	Dielectrics	625
Aluminium	526, 679	Diffusion	308
Aluminium alloys	61, 173, 203, 210, 217, 650, 859	Diffusion bonding	35, 135, 349, 982, 1045
Al-Cu-Mg-Fe-Ni	477	Directional solidification	989
Al-Cu-Mg-Si	655	Dislocations	17, 360, 949
Al-Li	143	Doping	949, 954
Al-Mg	17, 331, 596, 660, 673, 818	Ductile irons	319, 401
Al-Mg-Si	533, 905	<i>See also</i> Austempered ductile irons	
Al-Mn	93	Ductility	243
Al-Si	85, 497		
Al-Si-Mg	337	Electroluminescence	965
Al-Zn-Mg	769	Electron backscattering diffraction	69, 79, 85
Al-Zn-Mg-Cu-Zr	897	Electron beam welding	143, 251
Anisotropy	957	Electron channelling patterns	79
Annealing	85	Electroslag process	872
Anodise	217	Embrittlement	877, 918
Arc welding	791	Epitaxial layers	79
Argon	893	Epoxy coatings	163
Atom probe analysis	806	Erosion	217
Auger electron spectroscopy	877	Etching	961
Austempered ductile irons	24, 117, 223, 319, 401, 408, 813, 1007	Eutectics	5, 541, 989
Austenite	469, 568	Evaluation	679
		Extrusion	61, 203
Bainite	401		
Ball milling	192	Fatigue	389, 420, 497, 503, 1023, 1063
Band theory	971	Ferrite	313
Bismuth and bismuth alloys	5, 541	Ferrites	625
Boron	257, 1051	Fibre composites	852, 912, 982
Boron nitride	445	Fibres	551
Brazing	156, 1051	Finite element method	125
Brittle fracture	645	Flow stress	203, 210, 389
		Forging	575
Calcium	497	Fracture	439
Carbides	299, 989	Fracture toughness	192, 356
Carbonitrides	49, 731	Friction welding	673, 679
Cast irons	749		
<i>See also</i> Ductile irons, Iron and iron alloys, Steels		Gating	785, 841
Castings	687	Glass matrix composites	852
Ceramic matrix composites	415	Glass strengthening	163
Ceramic-metal joints	156	Grain boundaries	277
Ceramic tools	445	Grain boundary precipitation	313
Ceramics	600	Grain boundary sliding	17
Chemical analysis	533	Grain growth	85
Chip formation	439	Grain refinement	650, 769, 825
Chlorination	865	Grain size	243, 560
Chromium	872	Graphite	584, 749
Cleavage	645		
Coating	596	Heat transfer	702
Cobalt compounds	375	Heat treatment	117, 187, 319, 740, 806, 928
Cold rolling	289	Heaters	551
Cold working	389	Heterostructures	971
Composites	600	Hipping	103, 135, 1027
<i>See also</i> Ceramic matrix composites, Fibre composites, Glass		Homogenisation	308
matrix composites, Laminate composites, Metal matrix		Hot deformation	210, 459, 575, 755
composites, Particulate composites, Whisker composites		Hot ductility	379, 872
Computer simulation	740, 785	Hot isostatic pressing	
Cooling	331	<i>See</i> Hipping	
Copper alloys	12, 489, 872	Hot pressing	695
Corrosion	847, 937	Hot torsion	818
Corrosion resistance	56, 526, 604	Hydrogen	1016
Creep	31, 233, 251, 327, 555, 667, 1033		
Crystal defects	957	Impact strength	408, 604, 997, 1057
Cyclic loads	667	Impurities	497
		In situ tests	85
Deep level defects	945	Ingot moulds	600, 702
Deformation	125	Interface reactions	912, 918

Interfaces	182, 778	Recovery	865
Intermetallic phases	375, 1051	Recrystallisation	489
Intermetallics	477, 695	Recrystallisation texture	93, 289
Ions	893, 961	Recycling	497, 859
Iron and iron alloys	453, 526, 727, 806, 877, 989, 1023	Residual stress	360, 430
<i>See also</i> Cast irons, Steels		Reviews	709, 977
Isothermal transformation	299	Rheocasting	584
Kinetics	24, 223, 257, 277, 308, 631, 640, 832	Rolling contact fatigue	430
Laminate composites	35	Roughness	702
Laser beam welding	143	Scanning electron microscopy	85
Laser surface melting	56, 526	Schottky barriers	945
Lattice defects	375	Segregation	277, 331, 813, 877
Liquid metals	791	Semiconductors	
Low cycle fatigue	560	GaAlInAs	971
Machining	439, 445	GaAs	945, 949
Magnesium	533	GaS	954
Magnesium alloys	825	GaSe	954
Magnetic properties	110, 453	InAlAs	957
Magnetic testing	614	InP	957
Manganese	813	InSe	954
Maps	61, 949	porous silicon	965
Martensite	233, 313, 727, 806	SeGaBi	484
Mass transfer	937	silicon	961
Mechanical alloying	1039	Sensors	533
Mechanical properties	24, 103, 143, 156, 223, 233, 313, 343, 1016	Shape memory	12, 727
<i>See also</i> Tensile properties		Shot peening	360
Metal matrix composites	125, 327, 709	Silica	600
aluminium based	41, 135, 173, 182, 187, 192, 420, 511, 523, 584, 667, 687, 778, 912, 918, 982, 1039	Silicon	79, 408, 568, 813, 832, 893, 905, 1051
magnesium based	590	Silicon carbide	41, 511, 590, 667, 852, 1039
steel based	847	Sliding wear	928
titanium based	35	Sodium	937
Microsensors	965	Solidification	5, 331, 541, 740
Microstructure	5, 156, 257, 327, 343, 477, 503, 541, 584	Spray forming	489
Modelling	203, 210, 360, 523, 631, 785, 797, 897	Sputtering	893, 945
Molybdenum compounds	415	Squeeze casting	420, 912
Molybdenum disulphide	887	Stacking faults	369, 389, 957
Moulds	841	Steelmaking	600
Nanoindentation	778	Steels	277
Neutrons	954	<i>See also</i> Cast irons, Iron and iron alloys	
Nickel	568, 877, 1051	austenitic steels	251
Nickel alloys	349	bearing steels	430, 445
Nickel based superalloys	360, 369, 1033	carbon steels	439, 832
Nitrogen	560, 806, 1016	C-Cr-B steels	923
Nuclear reactor materials	937	C-Mn steels	379, 997
Nucleation	257, 797	Cr steels	56, 233
Optical fibres	596	Cr-Mo steels	299, 356, 469, 614
Orientation	69	duplex steels	56
Oxidation	415, 859	ferritic steels	243
Particle dissolution	308	high temperature steels	631, 640
Particle fracture	41	maraging steels	110, 618, 1063
Particulate composites	41, 590	microalloyed steels	49, 289, 645, 731
Pastes	977	spring steels	568
Pearlite	299	stainless steels	103, 243, 389, 560, 604, 679, 847, 937, 982, 1016, 1027
Phase equilibria	797	Stiffness	35
Phase transformation	110, 257, 369, 401, 469, 806	Stir coating	337
Photoluminescence	949, 965	Strain	79
Photorefectance	961	Strength	35
Plasma spraying	56	Stress analysis	430
Plasma surfacing	511	Stress field model	125
Plastic deformation	818	Stress relaxation	360
Post-weld heat treatment	343, 356, 503, 614	Structural performance	709
Powder technology	103, 192, 477, 590, 695, 825, 847, 887, 923, 977	Superplasticity	17, 761, 825, 923, 1039, 1045
Powders	977	Surface tension	791
Precipitates	233, 243	Synthesis	887
Precipitation	49, 93, 173, 631, 640, 655	Tempering	997
Precipitation hardening	369, 731	Tensile properties	356, 560, 584, 673
Productivity	61	<i>See also</i> Mechanical properties	
Quenching	401	Thermal activation	31
Rapid solidification	477, 797	Thermal conductivity	445
Rare earth compounds	375	Thermal shock	852
Reaction hot pressing	415	Thermodynamics	740
		Thermomechanical processing	49, 343, 1063
		Thixoforming	337
		Titanium	673
		Titanium alloys	31, 343, 349, 459, 503, 575, 755, 761, 1045, 1057
		Titanium aluminides	695, 755, 797
		Toughness	277, 420

Trace elements	650	Weld metal ferrite	257
Transient liquid phase bonding	135	Welding	343, 356, 604
		Whisker composites	918
Ultrasound	679	Wires	453
		Work hardening	389, 523
Vacancies	12	Working	755
Vanadium	568, 989		
Viscoplasticity	818	Yielding	660
Wear	41, 687, 749	Zinc alloys	928
Weld metal	503, 1057	Zirconium	769
		Zirconium alloys	865

